

RECYCLING AT LLNL

Turning scrap material and by-products from waste streams into reusable resources

Each year U.S. industry produces millions of tons of solid waste. Lawrence Livermore National Laboratory (LLNL) is committed to reducing its portion of this stream. In 1994, LLNL recycled and reused 23% of its 7,100 tons of solid waste.

Solid Waste

Electronic waste/recycling database

To track LLNL waste generation and recycling efforts economically, the LLNL Pollution Prevention Group (PPG) staff designed an electronic database. LLNL will investigate possible technology transfer of this innovative tool to private industry in 1995.

Office ledger paper collection and recycling

Since April 1991, LLNL has operated a full-site paper recycling program with over 110 facility collection points. The paper is transported, under escort, to a vendor facility where it is shredded and recycled for such uses as toilet paper and egg-crate cartons.

Classified paper is handled in a separate system. It is sent to a hammer mill on site for processing and subsequent recycling.

In 1994, LLNL recycled 314 tons of paper. Paper recycling was expanded in 1995 to include colored ledger paper. This expansion should result in additional solid waste diversion.

Magazine/newspaper recycling

Undeliverable magazines left at the LLNL Mail Room and uncirculated copies of the on-site newspaper (*Newsline*) are recycled through a local vendor who picks up the full bins from Donation, Utilization and Sales (DUS) on request. Although this program was implemented only in late 1994, it has already diverted 5 tons from the LLNL solid waste stream.

External phone book recycling

Three months of each year (to coincide with new phone book circulation), DUS collects non-LLNL phone books for recycling. The non-LLNL phone book recycling program will expand to a full year in 1995.

Wood recycling

Unusable wood such as broken pallets and demolition scraps are gathered in a collection yard and picked up by a local vendor. In 1994, this program diverted 540 tons from the LLNL solid waste stream.

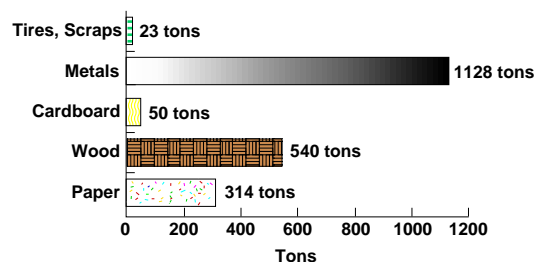
Plant clipping/composting

LLNL gardeners compost plant and tree clippings. The compost is used as an on-site soil amendment. This program diverts large amounts of plant material from the LLNL solid waste stream. It also saves resources because soil amendments can be generated on-site and do not have to be purchased.

Christmas tree pick up

LLNL holiday trees are collected by LLNL gardeners and then processed for use as on-site soil amendments.

Community food donation



In 1994, LLNL recycled and reused 23% of its solid waste.

The vendor that operates LLNL's three cafeterias donates excess prepared food to a local food bank for distribution to disadvantaged residents. In 1994, 2,163 pounds of prepared food was diverted from the solid waste stream.

Donation, Utilization and Sales Department's recovery/reuse/recycling programs

LLNL's Donation, Utilization and Sales (DUS) Department operates several innovative recovery/reuse/recycling "drop-off" programs. These programs recycle ferrous and nonferrous metal, cardboard, magazines, and newsprint. The programs reassign this surplus equipment throughout LLNL and donate it to federal agencies and public auctions. The cardboard recycling program now includes weekly pickups, which should divert an additional 10 to 20 tons from the solid waste stream each week.

The DUS reuse program includes pallet, moving-box, and equipment reuse. LLNL's Transportation Department assists DUS by delivering reusable/recyclable items. In 1994, DUS diverted 1,268 tons of material from the LLNL solid waste stream.

Rechargeable batteries and recycling and reuse

Reusable/rechargeable nickel cadmium and alkaline batteries, as well as chargers for pagers, are available from LLNL's Supply and Distribution Department. LLNL's Stores stocks "Super Chargers" for recharging/reusing nonrechargeable alkaline batteries. A pilot battery recycling program accepts alkaline, small lead acid, nickel cadmium, lithium, silver oxide, carbon zinc, and mercuric oxide batteries.

Printer toner cartridge reconditioning and reuse

LLNL routinely reconditions and reuses non-hazardous printer/copier toner cartridges. In 1994, 2,566 cartridges were returned for reconditioning/reuse, and over 600 of these reconditioned cartridges were purchased by Laboratory programs.

Education program—excess equipment reuse

The Education Program, operated by DUS, makes excess equipment available to schoolchildren. In fiscal year 1994, the program donated about \$600,000 of excess equipment (acquisition value) to California public schools.

Buy recycle

Wherever possible, LLNL purchases items that use recovered/recycled material such as copy paper, moving boxes, publication paper, and toner cartridges.

Employee awareness

The LLNL awareness program includes new employee orientation, *Newsline* articles, and briefings on request to employee groups. In addition, the PPG operates the Earth Hotline (E-ARTH or 3-2984) for employees with questions, suggestions, or information regarding recovery, recycling, and reuse.

Contact: Kent Wilson
Tel. No.: (510) 423-2115
E-mail: wilson20@llnl.gov
Fax No.: (510) 423-1395

Please write or call us for additional information:

UCRL-TB-120696

Pollution Prevention Group
Operations and Regulatory Affairs Division
Lawrence Livermore National Laboratory
7000 East Avenue, P.O. Box 808, Mail Stop L-626
Tel. No: (510) 422-1685